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Next Gen Sequencing: An Alternative to Culture-Based Microbiological Testing

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NEXT GEN SEQUENCING: AN ALTERNATIVE TO CULTURE-BASED MICROBIOLOGICAL TESTING

NEXT GEN DNA SEQUENCING ENABLES YOU...

- ...to analyze microbial communities and ecosystems in food products
- ...perform food safety testing
- ...address spoilage and other non-safety issues
- ...optimize food processing
- ...create databases of "good" microbial profiles associated with target product characteristics

STAY AHEAD OF THE CURVE IN TESTING

- explore differences between culture and non-culture based diagnostic methods
- learn about 16S ribosomal RNA-based identification
- discover how Next Gen DNA sequencing can fingerprint microbial communities
- see how Next Gen sequencing can replace microbiological testing
- learn how to use whole microbial community analysis

AT THE END OF THE WORKSHOP YOU WILL. . .

- ...understand the Next Gen process works
- ...evaluate the amount of effort and skills that are necessary for the process
- ...determine the amount of expertise necessary to set up sample preparation in-house versus outsourcing

OUR EQUIPMENT. . .

- Agilent Bioanalyzer 2100
- Roche- 454 GS FLX Pyrosequencer
- Bioinformatics pipelines to analyze the data

UPON REQUEST

Presented by:
Core for Applied Genomics and Ecology
University of Nebraska-Lincoln
<http://fpc.unl.edu>

INSTRUCTION

The workshop will be lead by *Dr. Andy Benson*, Director of CAGE and Professor of Microbiology in the Department of Food Science and Technology at UNL.

The workshop will be largely lecture-based with some lab exercises. This mixed format ensures that you will gain experience:

- identifying bacteria based on 16S ribosomal RNA
- extracting whole microbial DNA from different food samples
- with PCR amplification and Next Gen sequencing of 16S rRNA genes en masse from mixed populations

REGISTRATION

Registration fee depends on the size of your group and the location of the workshop. As few as 3-4 people is sufficient for us to offer this training. To discuss your needs and interest, please contact Nina Murray at nmurray2@unl.edu or fill out an information request form at <http://cage.unl.edu>

INQUIRE TODAY AT
cage.unl.edu
or contact Nina Murray at
(402) 472-2816

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